

Name: \_\_\_\_\_

Show all work and simplify all answers before circling/boxing them. If you do the problem incorrectly, or don't show sufficient work, you will be asked to rewrite the problem for full credit.

**Due next class.** Students who turn assignments in late (or do not attempt a problem) forfeit their ability to rewrite those problems for credit.

- (1) Simplify  $\sqrt{-28}$
- (2) Simplify  $\sqrt{-15} \cdot \sqrt{-5}$
- (3) Simplify  $\frac{-6 \pm \sqrt{-72}}{3}$
- (4) Perform the operation and write your answer in standard form:  $(-4 + 2i) + (7 + 35i)$
- (5) Perform the operation and write your answer in standard form:  $(7 + i) - (-8 + 5i)$
- (6) Perform the operation and write your answer in standard form:  $(2 - 3i)(1 + 4i)$
- (7) Perform the operation and write your answer in standard form:  $\frac{1-i}{2+3i}$
- (8) Simplify  $i^{103}$
- (9) Solve  $3x = 5x^2 + 1$
- (10) Solve  $2x(x - 2) = x - 4$